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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09.217,633 | 12.22.1998 | MASAHIRO NAKAMORI | 0505-047P | 4151 |

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

TRAN, HIEN THI

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 1764 | 2 |

DATE MAILED: 12/19/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/217,633

Applicant(s)

NAKAMORI ET AL

Examiner

Hien Tran

Art Unit

1764

BT

12

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 24 October 2001.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,4,6-8,11,13-15,17-20 and 22-24 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,4,6-8,11,13-15,17-20 and 22-24 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 22 December 1998 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has been used to designate both the metal carrier 2 (page 3, line 9) and the line 2 (page 4, line 22). Correction is required.

Specification

2. The disclosure is objected to because of the following informalities:
On page 6, line 2 apparently "end" should be changed to --and--.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1, 4, 6-8, 11, 13-15, 17-20, 22-24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, lines 13-15 it is unclear as to where it is disclosed in the specification that the catalyst layer is formed on an interior surface of the case and the case and the honeycomb structure have a reduced linear expansion during warm up and use. See claims 8, 15, 20 likewise.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 4, 6-8, 11, 13-15, 17-20, 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 13-15 it is unclear as to what is intended by "said cylindrical case and said honeycomb structure have a reduced linear expansion during warm up and use". See claims 8, 15, 20 likewise.

In claim 6, line 1 it is unclear as to how the catalyst layer is related to the catalyst layer set forth in claim 1, what is intended by "further including". See claim 18 likewise.

In claim 8, line 13 it is unclear as to how the catalyst layer is related to the catalyst layer set forth in line 2. See claim 20 likewise.

In claim 13, it is unclear as to which catalyst layer is implied. Note the two catalyst layer set forth in lines 2 and 13. See claim 23 likewise.

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

9. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16 CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

10. Claims 1, 4, 6-8, 11, 13-15, 17-20, 22-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Whittenberger et al (5,651,906) in view of Kohno et al (5,653,825), Arai et al (5,151,254) and Gulati (5,376,3441).

Whittenberger et al disclose a catalytic converter comprising:

a honeycomb structure shaped in a cylindrical form, said honeycomb structure having a plurality of channels (i.e. air vents) extending in an axial direction thereof; and
a cylindrical case covering an outer peripheral surface of the honeycomb structure wherein the case is composed of stainless steel.

The apparatus of Whittenberger et al is substantially the same as that of the instant claims, but fails to disclose whether the stainless steel case may be ferritic stainless steel case containing Mo.

However, Kohno et al disclose the conventionality of using ferritic stainless steel containing Mo of less than or equal to 2% for constructing converter housing due to its excellency in stress corrosion cracking resistance.

It would have been obvious to one having ordinary skill in the art to use the ferritic stainless steel containing Mo as taught by Kohno et al as an alternate material for the converter housing in the apparatus of Whittenberger et al for an improved stress corrosion cracking resistance and since use of such is conventional and no cause for patentability here.

With respect to the newly added limitation of catalyst layer, Arai et al discloses provision of coating a catalyst layer on the inside surface of the casing (col. 6, lines 39-42).

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It would have been obvious to one having ordinary skill in the art to coat the catalyst layer on the inside surface of the casing of Whittenberger et al so as to increase the exhaust gas cleaning effect as taught Arai et al.

Since Whittenberger et al discloses that the honeycomb structure and the casing are formed of stainless steel, apparently the structure and the casing will have a reduced linear expansion during warm up and use as that of the instant claims.

The modified apparatus of Whittenberger et al is substantially the same as that instantly claimed, but fails to disclose whether the catalytic converter may be located inside a muffler housing.

However, Gulati discloses the conventionality of providing an exhaust pipe connected to a muffler 12 containing a catalytic converter 20a therein.

It would have been obvious to one having ordinary skill in the art to provide an exhaust pipe connected to the muffler containing a catalytic converter therein in the modified apparatus of Whittenberger et al as taught by Gulati to purify exhaust gas as well as to absorb noise, as such is conventional in the art and no cause for patentability here.

Response to Arguments

11. Applicant's arguments with respect to instant claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (703) 308-4253. The examiner can normally be reached on Monday-Thursday from 7:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode, can be reached on (703) 308-4311. The fax phone number for this Group is (703) 305-3599 (for Official papers after Final), (703) 305-5408 (for other Official papers) and (703) 305-6078 (for Unofficial papers).

When filing a FAX in Group 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

HT

December 16, 2001

Hien Tran
PRIMARY EXAMINER
GROUP 1700